Amendments to the Specification:

Please replace the paragraph beginning at page 3, line 9 with the following rewritten paragraph:

--Figure 2 shows a sequence alignment of human interferon-alpha subtypes. The sequence alignment shows human interferon-alpha 1 (SEQ ID NO:1) from residues 24 to 189, human interferon-alpha 2a (SEQ ID NO:2) from residues 2 to 166, human interferon-alpha 2b (SEQ ID NO:3) from residues 2 to 166, human interferon-alpha 4 (SEQ ID NO:4) from residues 24 to 189, human interferon-alpha 5 (SEQ ID NO:5) from residues 24 to 189, human interferon-alpha 6 (SEQ ID NO:6) from residues 24 to 189, human interferon-alpha 7 (SEQ ID NO:7) from residues 24 to 189, human interferon-alpha 8 (SEQ ID NO:8) from residues 24 to 189, human interferon-alpha 10 (SEQ ID NO:9) from residues 24 to 189, human interferon-alpha 13 (SEQ ID NO:10) from residues 24 to 189, human interferon-alpha 14 (SEQ ID NO:11) from residues 24 to 189, human interferon-alpha 16 (SEQ ID NO:12) from residues 24 to 189, human interferon-alpha 17 (SEQ ID NO:13) from residues 24 to 189 and human interferon-alpha 21 (SEQ ID NO:14) from residues 24 to 189.--

Please replace the paragraph beginning at page 3, line 10 with the following rewritten paragraph:

--Figure 3 shows the sequence alignment of IFN-α2a (1ITF), IFN-β (1AU1), IFN-κ (IFNK), and IFN-τ (1B5L) that was used to construct the homology model of interferon-kappa. The sequence alignment shows IFN-α2a (SEQ ID NO:2), IFN-β (SEQ ID NO:15), IFN-κ (SEQ ID NO:16) from residue 27 to 179 and IFN-τ (SEQ ID NO:90).--

Please replace the paragraph beginning at page 25, line 7 with the following rewritten paragraph:

-- A homology model of interferon kappa was constructed based on the sequence of human interferon kappa (GenBank code 14488028 (SEQ ID NO:16)), the crystal structures for interferon tau (PDB code 1BL5) and interferon beta (PDB code 1AU1), as well as the NMR structure for interferon alpha-2a (PDB code 1ITF). The sequences for interferons alpha-2a, beta, kappa, and tau were aligned using the multiple sequence alignment tool in the Homology model of the InsightII software package (Accelrys), as shown in Figure 2. As the sequences share only approximately 35% identity, slightly different sequence alignments could have been used instead (see for example LaFleur et. al. J. Biol. Chem. 276: 39765-39771 (2001)). Based on similarity to the other interferon sequences, disulfide bonds are expected to be formed between residues C3 and C102 and between residues C32 and C155 (LaFleur supra); these disufides were used as constraints in the generation of the homology models. A total of nine homology models were generated using the Modeler tool in the InsightII software package (Accelrys). The

structures were analyzed for quality and the top four models were used in the analysis and design calculations described below. --

Please replace the paragraph beginning at page 54, line 4 with the following rewritten paragraph:

-- The DNA sequence, GenBank accession number NM_002176 (SEQ ID NO:31) (protein sequence counterpart, NP_002167 (SEQ ID NO:32)), encompassing the full-length human interferon beta cDNA gene containing the native signal sequence was modified to remove the signal sequence and facilitate high level expression in bacterial cells. Primers were designed to synthesize the region between positions 65-561 by recursive PCR. The primer sequences also biased the codon usage towards highly expressed *E. coli* bacterial genes. In addition, the codon for cysteine 17 (amino acid numbering with the signal sequence removed) was changed to serine. An internal SacI DNA restriction enzyme site was designed for ease of later mutagenesis as well as NdeI and XhoI restriction sites flanking the ends of the gene for cassette cloning into various expression vectors. The bacterial expression vectors pET28a and pET24a (Novagen) were used to sub-clone the interferon beta gene containing C17S between the NdeI and XhoI multiple cloning restriction sites. Cloning into pET24a expression in *E. coli* produces a C17S interferon beta variant (SEQ ID NO:33) while cloning into pET28a introduces the additional amino acid sequence MGSSHHHHHHSSGLVPRGSH (SEQ ID NO:34) to the N-terminus of C17S. This amino acid sequence includes a 6-His purification tag and a thrombin cleavage site for later removal of the added amino acid sequences. --

Please replace the paragraph and Table 20 beginning at page 56, line 25 with the following rewritten paragraph and table:

-- **Table 20:** Amino acid sequences at exposed hydrophobic positions for active interferon beta variants

		Amino acid position					
	Variant	5	8	47	111	116	120
SEQ ID NO:19	IFB1_2	Q	F	L	F	L	L
SEQ ID NO:35	IFB1_3	Q	F	K	F	L	L
SEQ ID NO:36	IFB1_4	L	E	L	F	L	L
SEQ ID NO:37	IFB1_5	L	E	K	F	L	L
SEQ ID NO:38	IFB1_6	L	F	K	F	L	L
SEQ ID NO:20	IFB1_7	Q	E	L	F	L	L
SEQ ID NO:39	IFB1_8	Q	E	K	F	L	L
SEQ ID NO:40	IFB1_9	L	F	L	N	L	L
SEQ ID NO:41	IFB1_10	Q	F	L	N	L	L
SEQ ID NO:42	IFB1_11	Q	F	K	N	L	L
SEQ ID NO:21	IFB1_15	Q	E	L	N	L	L
SEQ ID NO:43	IFB1_16	Q	E	K	N	L	L

SEQ ID NO:22	IFB1_23	Q	E	L	F	E	L
SEQ ID NO:44	IFB1_26	Q	F	L	F	L	R
SEQ ID NO:45	IFB1_27	Q	F	K	F	L	R
SEQ ID NO:46	IFB1_28	L	E	L	F	L	R
SEQ ID NO:47	IFB1_29	L	E	K	F	L	R
SEQ ID NO:48	IFB1_31	Q	E	L	F	L	R
SEQ ID NO:49	IFB1_32	Q	E	K	F	L	R
SEQ ID NO:50	IFB1_33	L	F	L	N	E	L
SEQ ID NO:51	IFB1_34	Q	F	L	N	E	L
SEQ ID NO:52	IFB1_35	Q	F	K	N	E	L
SEQ ID NO:23	IFB1_36	L	E	L	N	E	L
SEQ ID NO:53	IFB1_37	L	E	K	N	E	L
SEQ ID NO:24	IFB1_39	Q	E	L	N	E	L
SEQ ID NO:54	IFB1_40	Q	E	K	N	E	L
SEQ ID NO:55	IFB1_41	L	F	L	N	L	R
SEQ ID NO:56	IFB1_42	Q	F	L	N	L	R
SEQ ID NO:57	IFB1_44	L	E	L	N	L	R
SEQ ID NO:58	IFB1_47	Q	E	L	N	L	R
SEQ ID NO:59	IFB1_48	Q	E	K	N	L	R
SEQ ID NO:60	IFB1_50	Q	F	L	F	E	R
SEQ ID NO:61	IFB1_51	Q	F	K	F	E	R
SEQ ID NO:62	IFB1_52	L	E	L	F	E	R
SEQ ID NO:63	IFB1_55	Q	E	L	F	E	R
SEQ ID NO:64	IFB1_56	Q	E	K	F	E	R
SEQ ID NO:65	IFB1_63	Q	E	L	N	E	R
SEQ ID NO:25	IFB1_64	Q	E	K	N	E	R

--

Please replace the paragraph and Table 21 beginning at page 57, line 9 with the following rewritten paragraph and table:

-- **Table 21.** Specific activity data for interferon-beta variants.

The sequence for residues 5, 8, 47, 111, 116, and 120 is given for each variant, along with the total number of mutations, the EC50, and the ratio of the wild type to variant EC50. Variant IFN1_1 is the interferon beta wild type with C17S.

	Variant	5	8	47	111	116	120	# mut	EC50 (log ng/ml)	EC50 wt / EC50 var
SEQ ID NO:15	IFN1_1	L	F	L	F	L	L	0	5.306	1.0
SEQ ID NO:19	IFB1_2	Q	F	L	F	L	L	1	0.428	12.4
SEQ ID NO:20	IFB1_7	Q	E	L	F	L	L	2	0.179	29.6
SEQ ID NO:21	IFB1_15	Q	E	L	N	L	L	3	0.319	16.6
SEQ ID NO:22	IFB1_23	Q	E	L	F	E	L	3	0.277	19.2
SEQ ID NO:23	IFB1_36	L	E	L	N	E	L	3	0.294	18.0
SEQ ID NO:24	IFB1_39	Q	E	L	N	E	L	4	0.193	27.5
SEQ ID NO:25	IFB1_64	Q	E	K	N	E	R	6	0.240	22.1

--

Please replace the paragraph and Table 22 beginning at page 58, line 9 with the following rewritten paragraph and table:

--**Table 22.** Specific activity data for interferon-beta variants.

The sequence for residues 5, 8, 47, 50, 106, 111, 116, and 120 is given for each variant, along with the total number of mutations, the EC50, and the ratio of the wild type to variant EC50. All variants are in the C17S background.

	Variant	5	8	47	50	106	111	116	120	# mut	EC50 (ng/ml)	EC50 wt / EC50 var
SEQ ID NO:15	IFN1_1	L	F	L	F	L	F	L	L	0	1.90	1.00
SEQ ID NO:20	IFB1_7	Q	E	L	F	L	F	L	L	2	0.074	25.7
SEQ ID NO:66	IFB_GM2	L	F	S	S	S	S	S	S	6	130	0.015

--

Please replace the paragraph and Table 24 beginning at page 59, line 15 with the following rewritten paragraph and table:

--**Table 24.** Sequence analysis of selected interferon kappa variants with improved soluble expression.

SEQ ID NO:67	WT Seq	L-V	W	F-V	I	Y-M	F-Y	I	Y	V	C-Y-Y
	Mutation	Q-N	R	Q-R	N	Q-N	S-A	T	D	A	A-S-T
	Mutant	5, 8	15	28, 30	37	48, 52	76, 78	89	97	161	166, 168, 171
SEQ ID NO:26	IK_4-G7	L-N	R	F-V	I	Q-N	S-A	T	Y	V	C-Y-Y
SEQ ID NO:26	IK_12-E4	L-N	R	F-V	I	Q-N	S-A	T	Y	V	C-Y-Y
SEQ ID NO:68	IK_2-C11	L-N	R	Q-R	N	Y-M	S-A	T	D	A	A-S-T
SEQ ID NO:69	IK_10-D8	L-N	W	F-V	I	Q-N	F-Y	T	D	V	A-S-T
SEQ ID NO:70	IK_10-H7	L-N	W	F-V	I	Q-N	S-A	T	D	A	A-S-T
SEQ ID NO:71	IK_20-B12	L-N	W	Q-R	I	Q-N	S-A	T	Y	V	A-S-T
SEQ ID NO:72	IK_3-A11	L-N	W	Q-R	I	Y-M	S-A	T	D	A	A-S-T
SEQ ID NO:72	IK_3-H7	L-N	W	Q-R	I	Y-M	S-A	T	D	A	A-S-T
SEQ ID NO:73	IK_12-F11	L-N	W	Q-R	N	Q-N	S-A	T	Y	V	A-S-T
SEQ ID NO:74	IK_3-D10	L-V	R	F-V	I	Q-N	S-A	T	D	V	A-S-T
SEQ ID NO:75	IK_3-C10	L-V	R	F-V	I	Q-N	S-A	T	D	V	C-Y-Y
SEQ ID NO:75	IK_3-H11	L-V	R	F-V	I	Q-N	S-A	T	D	V	C-Y-Y
SEQ ID NO:76	IK_21-E1	L-V	R	F-V	I	Y-M	S-A	I	D	V	A-S-T
SEQ ID NO:77	IK_4-H11	L-V	R	F-V	I	Y-M	S-A	T	D	A	C-Y-Y
SEQ ID NO:78	IK_3-A2	L-V	R	F-V	I	Y-M	S-A	T	D	V	A-S-T
SEQ ID NO:79	IK_10-D2	L-V	R	F-V	N	Y-M	S-A	T	D	V	C-Y-Y
SEQ ID NO:80	IK_12-H4	L-V	W	F-V	I	Q-N	S-A	I	Y	V	C-Y-Y
SEQ ID NO:81	IK_27-A6	L-V	W	F-V	I	Q-N	S-A	T	D	A	C-Y-Y
SEQ ID NO:82	IK_2-B4	L-V	W	F-V	I	Q-N	S-A	T	D	V	C-Y-Y
SEQ ID NO:82	IK_3-F11	L-V	W	F-V	I	Q-N	S-A	T	D	V	C-Y-Y
SEQ ID NO:83	IK_14-A9	L-V	W	F-V	I	Y-M	F-Y	T	Y	V	C-Y-Y
SEQ ID NO:84	IK_19-A5	L-V	W	F-V	I	Y-M	S-A	I	D	A	C-Y-Y
SEQ ID NO:85	IK_3-G10	L-V	W	F-V	I	Y-M	S-A	I	D	V	C-Y-Y
SEQ ID NO:85	IK_4-A2	L-V	W	F-V	I	Y-M	S-A	I	D	V	C-Y-Y
SEQ ID NO:85	IK_4-A10	L-V	W	F-V	I	Y-M	S-A	I	D	V	C-Y-Y
SEQ ID NO:86	IK_16-G2	L-V	W	F-V	I	Y-M	S-A	T	D	A	C-Y-Y
SEQ ID NO:87	IK_22-A4	L-V	W	F-V	I	Y-M	S-A	T	D	V	A-S-T
SEQ ID NO:29	IK_1-C8	L-V	W	F-V	N	Q-N	S-A	I	D	V	C-Y-Y
SEQ ID NO:29	IK_23-C10	L-V	W	F-V	N	Q-N	S-A	I	D	V	C-Y-Y
SEQ ID NO:88	IK_12-H11	L-V	W	F-V	N	Q-N	S-A	T	Y	V	C-Y-Y
SEQ ID NO:89	IK_9-H4	L-V	W	Q-R	N	Y-M	S-A	I	D	V	A-S-T

--

Please replace the paragraph and Table 25 beginning at page 60, line 5 with the following rewritten paragraph and table:

--**Table 25.** Sequence analysis of some of the Interferon-kappa variant, which still retain activity, as tested in an ISRE assay as described above for interferon beta.

	WT seq	L-V	W	F-V	I	Y-M	F-Y	I	Y	V	C-Y-Y
	Mutations	Q-N	R	Q-R	N	Q-N	S-A	T	D	A	A-S-T
	Variant	5, 8	15	28, 30	37	48, 52	76, 78	89	97	161	166, 168, 171
SEQ ID NO:26	IK1_4_G7	L-N	R	F-V	I	Q-N	S-A	T	Y	V	C-Y-Y
SEQ ID NO:27	IK1_46_E2	L-V	R	F-V	N	Q-N	S-A	T	D	A	A-S-T
SEQ ID NO:28	IK1_47_C4	L-V	R	F-V	I	Y-M	S-A	I	Y	V	C-Y-Y
SEQ ID NO:29	IK1_23_C10	L-V	W	F-V	N	Q-N	S-A	I	D	V	C-Y-Y
SEQ ID NO:30	IK1_40_A10	L-V	R	F-V	N	Y-M	S-A	I	Y	V	C-Y-Y

--

Please replace first paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 1:~~SEQ ID NO:1--

Please replace second paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 2:~~SEQ ID NO:2--

Please replace third paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 3:~~SEQ ID NO:3--

Please replace fourth paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 4:~~SEQ ID NO:4--

Please replace fifth paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 5:~~SEQ ID NO:5--

Please replace sixth paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 6:~~SEQ ID NO:6--

Please replace seventh paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 7:~~SEQ ID NO:7--

Please replace eighth paragraph in Figure 1 on page 65 with the following:

~~--Sequence ID 8:~~SEQ ID NO:8--

Please replace first paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 9:~~SEQ ID NO:9--

Please replace second paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 10:~~SEQ ID NO:10--

Please replace third paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 11:~~SEQ ID NO:11--

Please replace fourth paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 12:~~SEQ ID NO:12--

Please replace fifth paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 13:~~SEQ ID NO:13--

Please replace sixth paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 14:~~SEQ ID NO:14--

Please replace seventh paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 15:~~SEQ ID NO:15--

Please replace eighth paragraph in Figure 1 on page 66 with the following:

~~--Sequence ID 16:~~SEQ ID NO:16--

Please replace first paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 17:~~SEQ ID NO:17--

Please replace second paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 18:~~SEQ ID NO:18--

Please replace third paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 19:~~SEQ ID NO:19--

Please replace fourth paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 20:~~SEQ ID NO:20--

Please replace fifth paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 21:~~SEQ ID NO:21--

Please replace sixth paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 22:~~SEQ ID NO:22--

Please replace seventh paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 23:~~SEQ ID NO:23--

Please replace eighth paragraph in Figure 1 on page 67 with the following:

~~--Sequence ID 24:~~SEQ ID NO:24--

Please replace first paragraph in Figure 1 on page 68 with the following:

~~--Sequence ID 25:~~SEQ ID NO:25--

Please replace second paragraph in Figure 1 on page 68 with the following:

~~--Sequence ID 26:~~SEQ ID NO:26--

Please replace third paragraph in Figure 1 on page 68 with the following:

~~--Sequence ID 27:~~SEQ ID NO:27--

Please replace fourth paragraph in Figure 1 on page 68 with the following:

~~--Sequence ID 28:~~SEQ ID NO:28--

Please replace fifth paragraph in Figure 1 on page 68 with the following:

~~--Sequence ID 29:~~SEQ ID NO:29--

Please replace first paragraph in Figure 1 on page 65 with the following:

--~~Sequence ID 30:~~SEQ ID NO:30--

Please replace Figure 2 on page 69 with the following:

--

Figure 2

```
SEQ ID NO:1    1: 24   CDLPETHSLDNRRTLMLLAQMSRISPSSCLMDRHDFGFPQEEFDGNQFQKAPAISVLHEL 83
SEQ ID NO:2   2a: 2    CDLPQTHSLGSRRTLMLLAQMRKISLFSCLKDRHDFGFPQEEF-GNQFQKAETIPVLHEM 60
SEQ ID NO:3   2b: 2    CDLPQTHSLGSRRTLMLLAQMRRISLFSCLKDRHDFGFPQEEF-GNQFQKAETIPVLHEM 60
SEQ ID NO:4    4: 24   CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRHDFGFPEEEFDGHQFQKAQAISVLHEM 83
SEQ ID NO:5    5: 24   CDLPQTHSLSNRRTLMIMAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83
SEQ ID NO:6    6: 24   CDLPQTHSLGHRRTMMLLAQMRRISLFSCLKDRHDFRFPQEEFDGNQFQKAEAISVLHEV 83
SEQ ID NO:7    7: 24   CDLPQTHSLRNRRALILLAQMGRISPFSCLKDRHEFRFPEEEFDGHQFQKTQAISVLHEM 83
SEQ ID NO:8    8: 24   CDLPQTHSLGNRRALILLAQMRRISPFSCLKDRHDFEFPQEEFDDKQFQKAQAISVLHEM 83
SEQ ID NO:9   10: 24   CDLPQTHSLGNRRALILLGQMGRISPFSCLKDRHDFRIPQEEFDGNQFQKAQAISVLHEM 83
SEQ ID NO:10  13: 24   CDLPETHSLDNRRTLMLLAQMSRISPSSCLMDRHDFGFPQEEFDGNQFQKAPAISVLHEL 83
SEQ ID NO:11  14: 24   CNLSQTHSLNNRRTLMLMAQMRRISPFSCLKDRHDFEFPQEEFDGNQFQKAQAISVLHEM 83
SEQ ID NO:12  16: 24   CDLPQTHSLGNRRALILLAQMGRISHFSCLKDRYDFGFPQEVFDGNQFQKAQAISAFHEM 83
SEQ ID NO:13  17: 24   CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGLPQEEFDGNQFQKTQAISVLHEM 83
SEQ ID NO:14  21: 24   CDLPQTHSLGNRRALILLAQMGRISPFSCLKDRHDFGFPQEEFDGNQFQKAQAISVLHEM 83

SEQ ID NO:1    1: 84   IQQIFNLFTTKDSSAAWDEDLLDKFCTELYQQLNDLEACVMQEERVGETPLMNADSILAV 143
SEQ ID NO:2   2a: 61   IQQIFNLFSTKDSSAAWDETLLDKFYTELYQQLNDLEACVIQGVGVTETPLMKEDSILAV 120
SEQ ID NO:3   2b: 61   IQQIFNLFSTKDSSAAWDETLLDKFYTELYQQLNDLEACVIQGVGVTETPLMKEDSILAV 120
SEQ ID NO:4    4: 84   IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143
SEQ ID NO:5    5: 84   IQQTFNLFSTKDSSATWDETLLDKFYTELYQQLNDLEACMMQEVGVEDTPLMNVDSILTV 143
SEQ ID NO:6    6: 84   IQQTFNLFSTKDSSVAWDERLLDKLYTELYQQLNDLEACVMQEVWVGGTPLMNEDSILAV 143
SEQ ID NO:7    7: 84   IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDFILAV 143
SEQ ID NO:8    8: 84   IQQTFNLFSTKDSSAALDETLLDEFYIELDQQLNDLEVLCDQEVGVIESPLMYEDSILAV 143
SEQ ID NO:9   10: 84   IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNDLEACVIQEVGVEETPLMNEDSILAV 143
SEQ ID NO:10  13: 84   IQQIFNLFTTKDSSAAWDEDLLDKFCTELYQQLNDLEACVMQEERVGETPLMNADSILAV 143
SEQ ID NO:11  14: 84   MQQTFNLFSTKNSSAAWDETLLEKFYIELFQQMNDLEACVIQEVGVEETPLMNEDSILAV 143
SEQ ID NO:12  16: 84   IQQTFNLFSTKDSSAAWDETLLDKFYIELFQQLNDLEACVTQEVGVEEIALMNEDSILAV 143
SEQ ID NO:13  17: 84   IQQTFNLFSTEDSSAAWEQSLLEKFSTELYQQLNNLEACVIQEVGMEETPLMNEDSILAV 143
SEQ ID NO:14  21: 84   IQQTFNLFSTKDSSATWEQSLLEKFSTELNQQLNDMEACVIQEVGVEETPLMNVDSILAV 143

SEQ ID NO:1    1: 144 KKYFRRITLYLTEKKYSPCAWEVVRAEIMRSLSLSTNLQERLRRKE 189
SEQ ID NO:2   2a: 121 RKYFQRITLYLKEKKYSPCAWEVVRAEIMRSFSLSTNLQESLRSKE 166
SEQ ID NO:3   2b: 121 RKYFQRITLYLKEKKYSPCAWEVVRAEIMRSFSLSTNLQESLRSKE 166
SEQ ID NO:4    4: 144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189
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SEQ ID NO:5    5: 144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSANLQERLRRKE 189
SEQ ID NO:6    6: 144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSSSRNLQERLRRKE 189
SEQ ID NO:7    7: 144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSFSTNLKKGLRRKD 189
SEQ ID NO:8    8: 144 RKYFQRITLYLTEKKYSSCAWEVVRAEIMRSFSLSINLQKRLKSKE 189
SEQ ID NO:9   10: 144 RKYFQRITLYLIERKYSPCAWEVVRAEIMRSLSFSTNLQKRLRRKD 189
SEQ ID NO:10  13: 144 KKYFRRITLYLTEKKYSPCAWEVVRAEIMRSLSLSTNLQERLRRKE 189
SEQ ID NO:11  14: 144 KKYFQRITLYLMEKKYSPCAWEVVRAEIMRSFSFSTNLQKRLRRKD 189
SEQ ID NO:12  16: 144 RKYFQRITLYLMGKKYSPCAWEVVRAEIMRSFSFSTNLQKGLRRKD 189
SEQ ID NO:13  17: 144 RKYFQRITLYLTEKKYSPCAWEVVRAEIMRSLSFSTNLQKILRRKD 189
SEQ ID NO:14  21: 144 KKYFQRITLYLTEKKYSPCAWEVVRAEIMRSFSLSKIFQERLRRKE 189
```

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Please replace Figure 3 on page 70 with the following:

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Figure 3

```
SEQ ID NO:16   IFNK: ldcnllnvhlrrvtwqnlrhlssmsnsfpveclreniafelpqeflqytq
SEQ ID NO:15   1AU1: MSYNLLGFLQRSSNFQCQKLLWQLNGRLEY-CLKDRMNFDIPEEIKQLQQ
SEQ ID NO:90   1B5L:   CYLSRKLMLDAR-ENLKLLDRMNRLSPHSCLQDRKDFGLPQEMVEGDQ
SEQ ID NO:2    1ITF:   CDLPQTHSLGSR-RTLMLLAQMRKISLFSCLKDRHDFGFPQE-EFGNQ

SEQ ID NO:16   IFNK: pmkrdikkafyemslqafnifsqht--fkywkerhkqiqigldqqaeyln
SEQ ID NO:15   1AU1: FQKEDAALTIYEMLQNIFAIFRQDSSSTGWNETIVENLLANVYHQINHLK
SEQ ID NO:90   1B5L: LQKDQAFPVLYEMLQQSFNLFYTEHSSAAWDTTLLEQLCTGLQQQLDHLD
SEQ ID NO:2    1ITF: FQKAETIPVLHEMIQQIFNLFSTKDSSAAWDETLLDKFYTELYQQLNDLE

SEQ ID NO:16   IFNK: qcleedenenedmkemkenemkpsearvpqlsslelrryfhridnflkek
SEQ ID NO:15   1AU1: TV-------------LEEKLEKEDFTRGKLMSSLHLKRYYGRILHYLKAK
SEQ ID NO:90   1B5L: TC-----------------------RG|MDPIVTVKKYFQGIYDYLQEK
SEQ ID NO:2    1ITF: AC-------------VIQGVGVTETPLMKEDSILAVRKYFQRITLYLKEK

SEQ ID NO:16   IFNK: kysdcaweivrveirrclyyfykftalfrrk
SEQ ID NO:15   1AU1: EYSHCAWTIVRVEILRNFYFINRLTGYLRN
SEQ ID NO:90   1B5L: GYSDCAWEIVRVEMMRALTVSTTLQKRLTK
SEQ ID NO:2    1ITF: KYSPCAWEVVRAEIMRSFSLSTNLQESLRSKE
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Please insert the enclosed 3-page text entitled "SEQUENCE LISTING" immediately preceding the claims.